

## POLYMORPHISM STUDY OF FOLP23 LOCUS IN CHINA NORTHERN HANS

**Jun Li M.D., Xianhua Jiang Prof., and Liping Bai M.D.**

*Liaoning Criminal Science and Technology Institute, Shenyang, P.R.C.*



STR FOLP23 locus, also called DHFRP2, which has been located at chromosome 6, is 3' end of the pseudogene of structural gene encoding human dihydrofolate reductase(DHFR). In this report, the STR FOLP23 was amplified by PCR, genotyped by vertical electrophoresis in denaturing polyacrilamide gel followed by silver staining. A population study of FOLP23 was performed on one hundred unrelated Chinese northern Hans, then allele distribution was put out. Five alleles and fourteen genotypes were detected with the frequency ranging between 0.105-0.459. Heterozygosity (H), discrimination power (DP), and PE were reported as 71.6%, 0.9172, and 0.4911 respectively. No significant deviation from Hardy-Weinberg equilibrium could be observed for this system. Several confirmed genealogies were examined using this method. No mutation was found that indicated what it inherited according to Mendelism. Fragments (alleles) length was measured by fluorescent dye incorporation technique and confirmed to be between 157bp and 173bp. Sequence of alleles was also studied by PCR direct sequencing in this work. We found that the core repeats was constituted of AAAM, where M is a single nucleotide polymorphism (SNP) representing A or C. After having compared the result in this research with that reported abroad, we found that our result is different from that of Koreans, but accord with that reported at Internet (Polymeropoulos). Applied to practical case identification, this system showed satisfying sensitivity and excellent applicability to degraded DNA test, and was regarded as a great polymorphism marker in forensic practice.